531,345

#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization

International Bureau



### 

## (43) International Publication Date 29 April 2004 (29.04.2004)

#### **PCT**

# (10) International Publication Number WO 2004/034928 A2

(51) International Patent Classification<sup>7</sup>:

**A61F** 

(21) International Application Number:

PCT/US2003/032616

(22) International Filing Date: 15 October 2003 (15.10.2003)

(25) Filing Language:

English

(26) Publication Language:

**English** 

(30) Priority Data:

60/418,511

15 October 2002 (15.10.2002) U

(71) Applicant (for all designated States except US): THE OHIO STATE UNIVERSITY [US/US]; 1960 Kenny Road, Columbus, OH 43210-1063 (US).

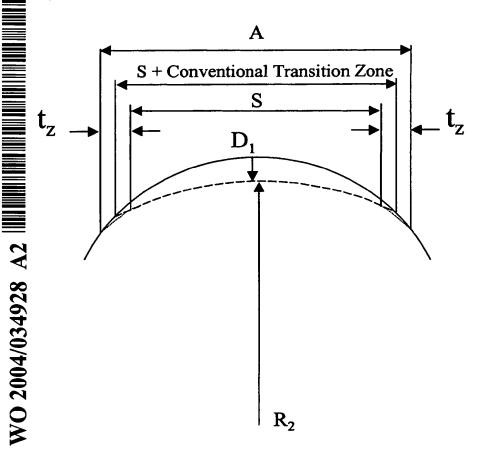
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ROBERTS, Cynthia [US/US]; 7259 Lyon Drive, Columbus, OH 43220

(US). MAHMOUD, Ashraf [US/US]; 430 Thackeray Avenue, Worthington, OH 43085 (US).

- (74) Agents: JIVIDEN, William, A. et al.; Dinsmore & Shohl, LLP, One South Main Street, Suite 500, One Dayton Centre, Dayton, OH 45402-2023 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

(54) Title: CUSTOMIZED TRANSITION ZONE SYSTEM AND METHOD FOR AN ABLATION PATTERN



(57) Abstract:-The present invention corneal discloses a refractive procedure providing a customized transition zone. customized transition zone provided according to the methods and systems of the present invention exhibits continuous curvature between an ablated optical zone and a non-ablated zone to address curvature discontinuity at the edge of the optical zone, thereby minimizing the biomechanical response and its postoperative effects on vision.

### WO 2004/034928 A2



SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.